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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY
Intellectual property Administration
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EXAMINER

DURAN, ARTHUR D

ART UNIT	PAPER NUMBER
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3622

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,514

Applicant(s)

SANTOS ET AL.

Examiner

Arthur Duran

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Handwritten signature

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

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DETAILED ACTION

1. Claims 1-20 have been examined.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims are rejected under 35 U.S.C. 101 because these claims have no connection to the technological arts. The method claims do not specify how the claims utilize any technological arts. For example, no network or server is specified. To overcome this rejection, the Examiner recommends that the Applicant amend the claim to specify or to better clarify that the method is utilizing a medium or apparatus, etc within the technological arts. Appropriate correction is required.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The

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phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in

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affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the current application, no technological art (i.e., computer, network, server) is being utilized by claims 1-20. Claims 1-20 do not disclose any technological art (i.e., computer, network, server) being utilized in the body of the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 11, 12, 13, 16 are rejected under 35 U.S.C. 102(b) as being unpatentable over Gerace (5,848,396).

Claim 11: Gerace discloses a system for forming a promotion campaign plan comprising: stored customer segment information indicative of mapping a plurality of customers to a smaller number of customer segments, said mapping being based on attributes that are perceived as being relevant to customer activity when presented with promotions (col 20, lines 9-20); stored promotion information regarding a plurality of promotions; stored market information regarding marketing considerations relevant to said promotions; stored management information regarding business objectives and business constraints relevant to said promotions; and

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an optimization engine configured to design a promotion campaign as an algorithmic response to each of said stored customer segment information, said stored promotion information, said stored market information and said stored management information, wherein said promotion campaign indicates promotion strategies on a promotion-by-promotion and segment-by-segment basis, said optimization engine being enabled to detect and automatically address inconsistencies and contradictions in achieving said business objectives and business constraints (col 12, lines 5-42; col 13, lines 10-20; col 13, lines 1-33; col 12, lines 25-30; col 33, line 63-col 34, line 20; col 34, lines 7-15; col 20, lines 9-19; col 18, lines 20-25; col 13, lines 9-20; col 12, lines 39-42).

Claim 12: Gerace discloses the system of claim 11, and Gerace further discloses that said stored management information includes budget constraints for each said customer segment, said optimization engine being configured to be responsive to said budget constraints such that said promotion campaign includes designations of portions of specific said customer segments that are to be presented with particular said promotions (col 15, lines 10-17; col 19, lines 35-40; col 19, lines 24-26; col 12, lines 8-20; col 19, lines 19-21).

Claim 13: Gerace discloses the system of claim 11, and Gerace further discloses that said optimization engine is cooperative with a feasibility engine that is configured to recognize and address said contradictions in said stored management information, said feasibility engine being enabled to determine resolutions to said contradictions that involve said business constraints (col 19, lines 20-32).

Claim 16: Gerace discloses the system of claim 11, and Gerace further discloses that said optimization engine is cooperative with an efficiency frontier engine that is configured to recognize said inconsistencies and to determine trade-offs among said business objectives, said

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efficiency frontier engine being responsive to a hierarchy of said business objectives (col 12, lines 27-35).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-10, 14, 15, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerace (5,848,396) in view of Deaton (5,687,322).

Claim 1, 20: Gerace discloses a computerized method of determining differential promotion allocation among prospective customers comprising the steps of:
entering management information that is specific to business management objectives and constraints, including entering budget information (col 12, lines 5-42; col 13, lines 10-20); and
defining a campaign plan for allocating presentations of a plurality of said promotions among said customers, including using automated processing to form said campaign plan on the basis of customer segments (col 13, lines 1-33; col 12, lines 25-30; col 33, line 63-col 34, line 20)
and said management information, said customer segments being based upon customer commonalities with respect to at least one customer attribute, said campaign plan being defined to include at least one restricted promotion for each customer segment (col 34, lines 7-15; col 20, lines 9-19; col 18, lines 20-25; col 13, lines 9-20; col 12, lines 39-42).

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Also, note that an advertisement is a type of promotion.

The Merriam-Webster online dictionary at www.m-w.com defines advertise and promote as:

“Main Entry: **ad·ver·tise**

Inflected Form(s): **-tised; -tis·ing**

1 : to make something known to : NOTIFY

2 a : to make publicly and generally known <*advertising* their readiness to make concessions> **b**

: to announce publicly especially by a printed notice or a broadcast

c : to call public attention to especially by emphasizing desirable qualities so as to arouse a desire to buy or patronize : PROMOTE

Main Entry: **pro·mote**

Inflected Form(s): **pro·mot·ed; pro·mot·ing**

1 . . .

2 a : to contribute to the growth or prosperity of : FURTHER <*promote* international

understanding> **b** : to help bring (as an enterprise) into being : LAUNCH

c : to present (merchandise) for buyer acceptance through advertising, publicity, or discounting”

Therefore, Gerace’s advertisements are a form of promotion.

Also, Gerace discloses product specials and discounts presented to targeted users (col 9, lines 10-14; col 32, lines 9-15).

Gerace does not explicitly disclose that each customer segment is assigned a specific percentage and at least one specific percentage is less than an entirety of said customer segment, each said specific percentage representing that portion of said customers from said customer segment that is to be presented with said restricted promotion.

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However, Deaton discloses that each customer segment is assigned a specific percentage and at least one specific percentage is less than an entirety of said customer segment, each said specific percentage representing that portion of said customers from said customer segment that is to be presented with said restricted promotion (col 92, lines 10-21; col 106, line 8-38; col 108, line 65-col 109, line 7; col 105, line 43-col 106, line 6).

Deaton further discloses that restricted promotions to a customer segment generates excitement among purchasers (col 109, line 5-7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Deaton's restricted promotion to a percentage of a customer segment to Gerace's restricted promotion to a customer segment. One would have been motivated to do this in order to further entice particular customer within a segment to make a purchase.

Claim 2, 19: Gerace and Deaton disclose the method of claim 1, 18, and Gerace further discloses that said step of defining said campaign plan includes:
automatically identifying an inconsistency in achieving two of said business management objectives;
automatically determining a guideline for resolving a trade-off between said two business management objectives; and
utilizing said guideline in configuring said campaign plan (col 15, lines 10-15; col 15, lines 29-35).

Claim 3: Gerace and Deaton disclose the method of claim 1, and Gerace further discloses that said step of defining said campaign plan includes:

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automatically detecting contradictions between said constraints and other aspects of said entered management information;

automatically identifying resolutions to said contradictions; and implementing said resolutions in said campaign plan (col 19, lines 15-32; col 15, lines 10-15; col 15, lines 29-35).

Claim 4: Gerace and Deaton disclose the method of claim 3, and Gerace further discloses that said step of automatically detecting said contradictions includes generating a report which identifies said contradictions and said resolutions (col 33, lines 35-col 34, lines 27).

Claim 5: Gerace and Deaton disclose the method of claim 1, and Gerace further discloses that said step of entering said management information includes entering data indicative of budget constraints (1) for individual said customer segments (col 19, lines 24-26; col 19, lines 19-21) and (2) for said overall campaign plan (col 19, lines 35-40; col 19, lines 24-26; col 12, lines 8-20). Furthermore, because the sponsor can indicate how many hits a sponsor wants to purchase (col 19, lines 24-26) and because a charge can be assigned per hit (col 12, lines 8-20), the sponsor is able to enter the amount of money he wishes to spend per package.

Claim 6: Gerace and Deaton disclose the method of claim 1, and Gerace further discloses that said campaign plan is specific to application via the global communications network referred to as the Internet (col 3, lines 50-54).

Claim 7: Gerace and Deaton disclose the method of claim 1, and Gerace further discloses that said campaign plan is specific to application via a telecommunications network (col 3, lines 44-46; col 3, lines 39-46).

Claim 8: Gerace and Deaton disclose the method of claim 1, and Gerace further discloses a step of entering market data on which said campaign plan is further based, including entering

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conversion data that is indicative of the responsiveness of each said customer segment to said promotions (col 33, line 43-col 34, line 27).

Claim 9: Gerace and Deaton disclose the method of claim 8, and Gerace further discloses that said step of entering said market data includes providing null promotion data for individual said customer segments, said null promotion data being indicative of probabilities of achieving said business management objectives during an absence of said promotions (col 19, lines 19-25).

Claim 10, 14, 15, 18: Gerace and Deaton disclose the method of claim 1, 11, 17.

Gerace does not explicitly disclose that supply chain data or availability of goods or services can be a consideration in regards to promotions.

However, Deaton discloses that supply chain data or availability of goods or services can be a consideration in regards to promotions (col 17, lines 17-38; col 94, lines 43-48; col 103, lines 5-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Deaton's promotions that consider the supply of the item to be purchased to Gerace's targeted promotions to a user. One would have been motivated to do this in order to provide promotions of products that are of more timely benefit to the sponsor.

Deaton further discloses tracking on-hand inventory (col 103, lines 5-10).

Deaton does not explicitly disclose that the data indicates currently ordered inventory.

However, Deaton discloses that when an inventory is short of a product can be monitored (col 103, lines 7-10) and that promotions can be geared to a product group, specific product, or department (col 103, lines 20-25) and that incentives can be related to product inventory situations (col 103, lines 7-10).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to that Deaton's gearing incentives towards product inventory situations can include the product situations of ordering products when the products are low on inventory. One would have been motivated to do this in order to provide a more comprehensive product inventory situation to relate to product promotions.

Claim 17: Gerace discloses a method of determining differential promotion allocation among website visitors comprising the automated programming steps of: entering market data that includes visitor conversion information and null promotion information, said conversion information being specific to visitor groups that are based on common attributes among said visitors, said conversion information identifying group-by-group characteristics relating to desired website visitor activities (col 12, lines 6-42; col 33, lines 35-col 34, line 28), said null promotion information identifying factors specific to said groups and said desired website visitor activities when there is an absence of promotions that are designed to promote said website visitor activities (col 18, lines 20-25); entering management data that includes business objectives and business constraints, said business objectives including information regarding target numbers of conversions and target purchases, said business constraints including group-by-group budget constraints; and computing a campaign plan that is specific to each said group and each said promotion, said campaign plan being based upon said market and management data (col 12, lines 6-42; col 33, lines 35-col 34, line 28).

Gerace further discloses tracking company profit levels or revenue levels (col 11, lines 6-14).

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Gerace does not explicitly disclose target profit levels or target revenue levels.

However, Deaton discloses target profit levels or target revenue levels (col 34, lines 35-40; col 63, lines 37-43; col 63, lines 55-65; col 74, lines 55-62; col 75, lines 3-10; col 124, lines 43-55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Deaton's tracking of profit or revenue to Gerace's optimal targeted promotions. One would have been motivated to do this in order to provide promotions that best optimize a sponsor's revenue or profit from purchases.

Conclusion

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Barnett (6,321,208) discloses advertising campaigns to different customer segments;
- b. Henrick (6,055,510) discloses advertising campaigns to different customer segments;
- c. Katz (6,055,513) discloses advertising campaigns to different customer segments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arthur Duran whose telephone number is (703)305-4687. The examiner can normally be reached on Mon- Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (703)305-8469. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9326.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1113.

AD

1/7/03

Arthur Hues